

REPORT

A HOSPITAL FOR THE MENTALLY DISEASED

Thesis for

BACHELOR OF ARCHITECTURE DEGREE

Submitted by

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Letter of Submittal

May 27, 1933

Dean William Emerson  
School of Architecture  
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Boston, Massachusetts

Dear Sir:

I hereby submit the drawings and report that constitute my thesis for the degree of Bachelor of Architecture. This problem, although fictitious, deals with an actual site and has the essential requirements for a practical problem.

Problems of cost have been minimized since it was thought that the time would be more wisely spent in obtaining a well designed problem. As a whole, economy in construction and planning was carefully considered.

The combining of the study of psychiatry with that of architecture has proved extremely valuable because of the profound social aspects which have been disclosed.

Respectfully submitted,

Leon Hyzen

## BIBLIOGRAPHY

The American Hospital of the Twentieth Century  
Edward F. Stevens

Architectural Forum - Hospital Reference Number  
Architectural Record, February 1932.

Numerous magazine articles.

State report on hospitals for mental diseases.

Hospitals and Esthetics Grosvenor Atterbury

## INTERVIEWS

Dr. Hinsie, Psychiatric Institute, New York City

Dr. Donald Gregg, Channing Sanatorium, Wellesley, Mass.

Dr. Moore, Metropolitan State Hospital, Waltham, Mass.

Dr. Wood, McLean Hospital, Waverly, Mass.

Dr. Overholzer, Ass. Commissioner of Mental Diseases of  
Massachusetts.

Miss Mary Holland, Danvers State Hospital, Danvers, Mass.

## OTHER SOURCES OF INFORMATION

Visits were made to the following hospitals:

Cornell Medical Hospital	New York
Metropolitan State Hospital	Waltham, Mass.
Boston Psychopathic Hospital	Boston, Mass.
Worcester State Hospital	Worcester, Mass.
Danvers State Hospital	Danvers, Mass.
McLean Hospital	Waverly, Mass.

## PREFACE

There has been of recent years an awakened interest in the field of mental treatment due in part to a realization by the people of the innumerable cases of "crack-ups" caused by the high tension of modern living. These facts have been forcefully brought to the attention of the public in newspapers, magazines, and on an increasing scale, in present fiction. Statistics have been produced showing the increasing percentage of affected people. Gloomy forecasts are made as to the greater chance the rising generation has of "going mental" - the figures being one out of twenty at the present rate. Also the study of psychology spreading in schools and colleges, has focused attention on the functions of the human mind in both normal and aberrant phases.

Once a person becomes conscious of the great emphasis placed upon the field which relates to this subject, and, as the writer has pointed out, the search for the evidence need be neither intense nor esoteric, the next step to be considered is what kind of treatment for the truly afflicted is to be given and under what conditions are they to be housed. Since these advances are comparatively new a specialized field in the housing and treatment of mental patients has been created. Research by

the writer has shown that most mental hospitals have been designed by men with only general hospital plan experience. This has resulted in the neglect of the special problems presented by the mental hospitals.

In view of these facts, the author determined to do as much as possible in presenting an ideal analysis for the housing of mental patients. In addition, an attempt was made to collaborate with authorities in order to install a complete medical equipment for treatment. The first few weeks of research were occupied with certain problems of social economics, the diversified field of mental diseases, and the vast number of methods for treatment. The result which has been presented in this thesis is a hospital housing sixty patients with facilities for physical and mental treatment, including the necessary maintenance equipment.

He feels constrained to say that this work is not complete in every detail. It is only too obvious to indicate that the normal human being is difficult to satisfy from the architectural point of view. To consider the aesthetic tastes of men and women who are mentally afflicted is inconceivable. Accordingly, this work attempts to delineate some features which may be of use to those who are engaged in the problems of housing mental patients.

### 3.

Statistics show the deplorable increase of mental patients in the past years without any sign of retardation. Mental hospitals by far exceed any other type of hospital in bed capacity. Laws as enacted by society for its own preservation, plus changing social and economic conditions have undoubtedly been important factors in causing this situation. Society has been forced, therefore, to assume the heavy obligation of supporting these individuals by segregating them in institutions. Continued application to the task of improving conditions underlying this evil is greatly encouraged, since one feels certain that there are basic factors common to the majority of those who are mentally ill, which can and should be brought to light. Doubtless much is being done by sociologists and psychologists, but as yet not enough to give any appreciable relief to the tax burdened population. What should be done relative to reducing the ever increasing number of afflicted cases is beyond the scope of this report. The objective of this thesis, as has been stated, is to present a solution for the housing of mental patients under the most favorable conditions known to medical science.

A small group of friends studying medicine, familiar with psychiatry and the facts mentioned in the last para-

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graph, influenced the writer to present this thesis and aroused an enthusiasm which has made this work possible. To these friends he wishes to express his sincere thanks and warmest appreciation. The the following men who gave their invaluable assistance and encouragement, he herewith extends his grateful acknowledgment; Dean William Emerson, Professor H. W. Gardner, and Miss F. W. Stiles, Librarian, School of Architecture, Massachusetts Institute of Technology; Dr. S. W. Hamilton, National Committee for Mental Hygiene; Edward F. Stevens, Professor L. F. Pilcher, Pennsylvania State College; and Dr. Overholzer, Massachusetts Department of Mental Diseases.

A PROGRAM FOR A HOSPITAL FOR THE MENTALLY DISEASED.

A group of doctors has formed a board of directors in order to finance the erection of a hospital for a small number of people of means who are mentally diseased. This hospital will be financed by the well to do patients. In this way, state support is eliminated and the opportunity for rendering elaborate care and individual treatment is afforded.

The hospital will provide for sixty patients of the following mental classification: the convalescent, the disturbed, and the appreciative chronic. Each type will be divided into three groups depending on the stage of affliction. Since the Cottage Type Hospital has been decided upon as possessing a number of well established advantages over any other kind of institution for the treatment of mental diseases, this type of hospital will be used for the solution of this problem.

The board has acquired for this purpose several hundred acres of land situated in the Berkshire Mountains a few miles from Pittsfield, Massachusetts, and on this land will be constructed the following group of buildings:

ADMINISTRATION BUILDING

Basement Floor; To be used for storage space where will be kept various supplies (except food) of the hospital



Entrance to the underground tunnel.

First Floor: A large waiting room, two offices for the medical directors, who will be in charge, a general office with a connecting vault, an office for the assistant doctors, a small hostess room in an inconspicuous location, a telephone operator's booth, where it will not be seen, and the necessary toilets, one for the public and one for the employees.

Second Floor: A room for each of the two stenographers, one for the hostess, and one for the female occupational therapist. Common bath and toilet facilities.

### SOCIAL BUILDING

Basement Floor: On this floor will be the occupational therapy unit, which will be composed of the following rooms: for women, a handicraft room and a loom room, for men, a printing shop and a carpenter shop. These rooms may be so arranged as to be interchangeable from one type of occupation to another. This floor will also contain a large storage room for supplies. Toilets for men and women will complete this unit. Accessibility from the outside to the unit would be desirable. Storage supply rooms for the kitchens with the necessary refrigeration and a receiver's office will complete this floor.

First Floor: A large social hall with a raised platform. The hall, to be used as a chapel, and for all types of social entertainments, will open on an outdoor pavilion. During pleasant weather the pavilion will be used for lounging. A dining room for the patients with a seating capacity of forty, to be used by both sexes at the same time. A cafeteria for nurses and employees with a seating capacity of twenty-five. A large kitchen will prepare food for the dining room, cafeteria, clinic building and cottages. The kitchen will have preparation rooms for meat, vegetables, dairy foods and a bakery. Vegetable preparation will include the necessary sinks, a parer, and tables. Meat preparation will include a block, sink, grinder, and slicer - similar block and table for fish. Dairy preparation will include sink and tables. These preparation rooms will have their own refrigeration services. The bakery will include a large oven, kettles, and a large work table, drawers and bins under. The kitchen proper will have the necessary equipment for cooking, dishwashing and wall cases for utensil storage. Included in the kitchen will be a small section given over to a diet kitchen, a dietitian's office and a small help's dining room. Storage rooms will be located in the basement directly below and connected with kitchen

by means of stairs and a large elevator. Food trays for patients in the Clinic Building and Cottages will be prepared in the kitchen and loaded on trucks to be distributed.

Second Floor: A library, writing room and toilet will include the elements on this floor.

### CLINIC BUILDING

The Clinic Building will be used for the disturbed and the appreciative chronic patient and will contain the necessary equipment and facilities, with the exception of food supply, to permit it to function as an independent unit.

Basement Floor: Dispensary consisting of a treatment room, pharmaceutical office, and supply room. Chill and fever rooms, X-ray room, and a small room used as a morgue.

First Floor: Male ward containing private rooms, an isolation ward of two rooms for disturbed patients with a continuous flow bath connecting, a large commons room, a solarium, a waiting room, a diet serving kitchen, utility room, and a hydrotherapy unit, which will consist of: a waiting room, three dressing booths, three continuous flow baths, a needle spray, Vichy bath, foot bath, a shower, sink, water closet, refrigerator, medicine cabinet, several chairs, a record desk, two screens, a

small linen warming closet, and several stands for compress basins. Adjoining the hydrotherapy room will be the pack room containing one pack bed supplied with a rubber covered mattress, a small stand for cephalic cold, a closet and a chair. An electro-therapy unit containing two beds, electric equipment for treatment and a storage room will also be a part of the hydrotherapy unit. The necessary toilets and baths.

Second Floor; With the exception of the entrance motives the second floor containing the female ward, will have the same requirements as the first floor.

Third Floor; The surgical unit serving the entire hospital is to be located on this floor and will contain two private rooms for patients, an operating room, sterilizing room and a scrub-up room. Adjoining will be an office and examination room.

A small room used as a morgue with the necessary facilities will be located in the basement.

The Clinic Building will be served by stairs and a bed elevator. A separate entrance for patients who are to be administered hydrotherapy but do not stay at the Clinic, will be provided in addition to the main entrance. The Clinic, the Social Building, Nurses Home and Administration Building will be connected one to the other and all

of these to the Power-House and Laundry by means of an underground tunnel. This tunnel will serve as means to convey food and supplies to the various buildings and also as a pipe tunnel; the pipes being exposed and carrying heat, light, and waste disposal to and from the buildings.

There will be, in the main group of the hospital, six cottages with a capacity for forty patients. The cottages, three for men and three for women, will be composed of two types known as "Cottage A" and "Cottage B". Four will be of Cottage A and two of Cottage B.

#### COTTAGE "A"

First Floor: Four combination bed and sitting rooms with private bath. Adjoining each room will be a sleeping porch. A serving kitchen and a nurse's station will also be included.

Second Floor: The second floor will have the same units as the first floor with the exception of the entrance vestibules and the serving pantry. Eight patients will be housed in each cottage of the "A" type.

COTTAGE "B" This type cottage will be similar in plan to Cottage A.

First Floor: Two bedrooms each connected with a

separate sitting room, sleeping porch, and bath room. Serving kitchen and nurses station together with the necessary services.

Second Floor; Similar to the first floor with the exception of the entrances and serving kitchen. In both type cottages and on the two floors the nurses will be in control of all the rooms. The cottages will not have to be connected one to the other or to other buildings with underground tunnels, since it is expected that the patients will eat in the Social Building. Serving pantries are to be placed in each cottage in case a patient is indisposed to eat with the others.

Each cottage will be equipped with its own heating plant which will be located in the basement and supervised by an attendant.

RECREATIONAL BUILDING: To be composed of the following; each sex having its own facilities; a small gymnasium, bowling alley, badminton court, a billiard room, ping-pong room, locker and shower rooms and storage rooms will be in the basement. Two tennis courts will adjoin the building on the exterior. An outdoor swimming pool used by both sexes will be found close to the shower rooms. Close by the recreational building will be a

stable for eight horses, with the necessary maintenance equipment.

The recreational building plays an important part in the institution since a patient during the last stages of recovery spends a great deal of his time here. This necessitates in placing the building as far away as possible from the rest of the group. It should have attractive landscaping in the immediate vicinity and be easily accessible from the cottages. Airy and well orientated, the facilities provided should encourage the patient towards mental relaxation.

#### NURSES HOME

A single building housing nurses and attendants and certain other employees of both sexes. When the hospital will be enlarged a separate building for female nurses and attendants will be erected.

In the present building there will be four floors and a basement, with a fire wall which will run through the center of the building separating male and female quarters.

Basement Floor: Small lecture hall seating twenty-five to be used in demonstrating new methods for the treatment of mental patients and describing new discoveries. Since this hospital will not have any student nurses

no teaching provisions of great extent need be provided. A small kitchen and an adjoining dining room for the night nurses, a large lounge for social gatherings, utility room, shower and locker-room, small laundry, and storage rooms for trunks, etc., will complete this floor.

#### First Floor:

Individual rooms for twenty nurses supplied with a closet, lavatory, bed, chair, and bureau, a lounge room and library, kitchen, tea room, utility room, a small linen room, and common bath and toilet facilities for twenty people. The second, third and fourth floors on both sides of the wall will be treated in the same manner as the layout on the first floor. A matron who will be in charge of the female section, and a supervisor who will be in charge of the male section will each have a suite, composed of a living room and bedroom on the first floor of their respective sections in control of the single front entrance.

Connected with the nurses home will be three tennis courts for each sex.

#### POWERHOUSE AND LAUNDRY

These two buildings will be combined into one unit for the sake of economy in operation. Placed out of sight of the other buildings, it must be close enough in order



to serve economically heat to the main buildings. Tunnels placed underground must also be considered as a good reason for not placing the powerhouse too far from the other buildings, since a large amount of heat would be lost in the pipes and would necessitate larger size boilers.

**First Floor:** A large boiler room containing space to provide for a main and auxiliary boiler with other equipment which will supply heat to the administration, social, and clinic buildings and the nurses home. It will also maintain heat for the laundry and itself, and supply the laundry with such steam for washing that may be needed.

Adjacent to the boiler room will be the laundry, composed of a receiving room, washing room, ironing room, delivery room, and the necessary offices and toilet rooms.

Also connected with the boiler room will be a carpenter's shop, a paint shop and a machine shop; these are to be used in maintaining the hospital.

**Second Floor:** Over the laundry and shops will be located dormitories for the employees of the powerhouse, laundry and shops. Women on one side and men on the other with a method of separation similar to that of the Nurses Home. Common toilet and bath rooms will be provided as well as lounge rooms for each sex.

DIRECTORS HOMES:

Two private homes one for each director will be provided both similar in plan and design. Each will consist of

First Floor: Entrance hall, living room, dining room, kitchen, and breakfast nook. Also a room for one servant with a toilet and bath.

Second Floor; A master's bedroom, two bedrooms and a guest room. A linen closet and bathroom for the master's bedroom, one for the guest room, and a common bath room for the other bedrooms. Adjoining, a garage for two cars.

Means for expansion will be provided for as it is the hope and intent of the directors to enlarge the hospital when the opportunity presents itself. Other buildings will be added to provide for the needs and comforts of an increasing number of patients and employees. The plot was selected with this end in view. It is also to be earnestly recommended that further building will incorporate the original intention of using modern architecture to give a certain airiness to the group both from the exterior and the interior - and to continue the use of long, horizontal lines in contrast with the mountainous vertical lines of the natural setting in the vicinity.

The above ideas will be important not only from an

aesthetic, but also from a psychological and health standpoint since the deploy of the buildings would force the patients out of doors into the health giving fresh air and sunshine. Well designed buildings, pleasing to the eye, will have a beneficial effect on the patient and will aid in improving his condition.

#### THE PRIVATE MENTAL HOSPITAL

Set aside for persons of considerable means the private hospital plays a significant role in creating an atmosphere of comfort and ease similar to the one the patient has enjoyed before he arrived. Since his previous environment has been one that afforded him certain luxuries of life, it is natural that he would feel more comfortable in similar surroundings. This means that more elaborate provisions than are made in a state institution must be installed for a patient in a private hospital.

Therefore, one can proceed to design this type hospital without being concerned with the financial limitations of the state budget. The most modern methods for treatment can be instituted and an open hand is given to provide many forms of social entertainment and recreational activity. One should not gather by this that state

institutions are entirely without these provisions. As a matter of fact, liberal-minded superintendents of many state hospitals have made more progress in furthering a rapid cure for patients than any other individuals.

While on the one hand the state treats mental patients of insufficient financial support and the private hospital provides for patients of wealth, on the other hand very few mental hospitals, if any, have been established for the individual of moderate means. Such institutions, for which there is an urgent demand, seem to be entirely neglected. The patient of moderate means is forced either to go to a state hospital which he deeply resents or to the private one, which is beyond his financial capacity. Hospitals should be erected for this class of individuals. These could be maintained partially by state contributions, by private donations, and by the patient himself who will pay a small sum for the treatment that he receives.

The writer has digressed briefly from his own work to add these few comments on the need of such hospitals. During the time spent in research he found men at the head of various institutions, who urged him to plan such a hospital. With a definite program already set before him, the writer could not diverge from his original purpose.

He hopes, however, that someone will avail himself of the opportunity to undertake the designing of such an institution.

#### THE SITE

Situated in the heart of the Berkshire Mountains some five miles from Pittsfield, Massachusetts, the plot is on the knob of a hill with the land gently sloping off to the south side and descending rather sharply on the other three. A winding and picturesque road connection the main highway, one-half mile away, enters the hospital area on the east side, at the high point of the plot.

Since in most cases treatment of disorders require a prolonged period of hospital residence, it is impossible to crowd the units on a small plot of land, capable merely of accommodating them and setting them off to architectural advantage. Therefore, an extra large plot of land has been selected.

The site is five miles from a large center of population (Pittsfield); is approximately two and one half miles from the railroad station of Dalton. Visitors and relatives may easily reach the hospital with these conveniences. And moreover the personnel may find opportunities for recreation and social intercourse outside the limit of the hospital reservation. A great advantage of the loca-

tion is that the hospital is in close contact with the medical center of Pittsfield, where services of specialists and other advantages may be secured. This contiguity does a great deal towards promoting a scientific spirit on the part of the medical and nursing staff and prevents complete isolation that is very harmful to a hospital of this type. Close connection with the town and city by both highway and railroad permits a convenient delivery of fuel and supplies.

Orientation and disposition of the various buildings created a major problem. It was decided to arrange the buildings to conform with the general contours of the land and to place the main buildings on the high land with the small cottages sloping away from them. This would leave means to increase the number of cottages when the time comes for expansion. This also permits a natural drainage of the site without extra cost. Water for drinking and other purposes, such as fire protection, is piped to the site from a reservoir a mile and a half away. The reservoir, on higher ground, permits the water to reach the hospital without the use of pumps. The informality and picturesque setting is another advantage of this site offering quiet rest, contentment and happiness to the patient.

THE GENERAL PLAN

Although having mentioned in the program that the "Cottage" type has many more advantages over other types of institutions, the reasons were not given. Many years ago insanity was regarded as one disease, but modern psychiatry has shown us that persons with mental disorders suffer from many conditions that differ from one another in their nature and their prospects of recovery; and that just as the conduct of each patient varies, so do the probable durations of treatment and method of management vary with each case. Classification is required not only as a measure of humanity, but as an actual means of treatment. Clinical results will be good where classification is successfully accomplished and correspondingly unfavorable where it is impossible. Such a classification, to be useful, must be carried out not only in housing of patients, but in their recreation and occupation.

Besides having the fire hazard reduced, the spread of contagious and infectious disease lessened, the cottage type hospital resembles to the least degree that of an institution.

After careful study of the topographical layout of the site, the following arrangement of the buildings was adopted.

The administration building faces the hospital road that leads to the main road. From the drive no view of the buildings may be seen since they all lie to the rear or to one side of the administration building. This was so planned in order to keep all patient circulation away from visiting traffic. It also tends to prevent parole patients from gathering in small groups near the entrance, a fact which might have some unfavorable psychological reaction on the incoming patient. It will, in addition, eliminate the possibility of automobile accidents.

Beyond the administration building has been placed the social building, with the main rooms facing the south. On high ground it overlooks the cottage group on the south and the nurses home on the north. It is readily accessible to all patients and is connected to the administration building by an underground tunnel.

To the north, east of the administration building away from the main group yet connected with them by a subterranean passage, is the clinic building providing southern exposure to the day room and to each patient's room. Every patient who is brought to the hospital is first taken to the clinic for observation and examination where it is determined whether he is to stay at the clinic or in a cottage. This is what has necessitated the placing



of the clinic so near the administration building. Yet it had to be located away from the remainder of the group so that it would not disturb the convalescent patients. Landscaping prevents the building from being seen from the road and from the surrounding buildings. An excellent view of the country may, however, be had from the rooms.

Located on the ridge of the hill is the nurses home with its recreational area. The nurses home has been placed as distant from the hospital group as is conveniently possible so that the nurses will have their own leisure when they are off duty.

To the rear of the buildings mentioned above, and out of sight, has been placed the powerhouse and laundry. The powerhouse, connected with these buildings by an underground passage, is screened from view by foliage and landscaping.

On the south side of the social building lies the group of cottages divided into two units, one for men and the other for women. Each cottage is slightly screened from the others by shrubbery and trees. A change in level of each cottage makes it convenient in obtaining for each patient as much privacy as is possible.

Just beyond, still to the south of the cottages, has been placed the recreational building. Easily reached by

means of a small road, the building has been placed on a short level piece of land to accommodate adjacent tennis courts and swimming pool. Shelters and intimate features have been provided to induce the patient to spend as much time here as possible.

A small road branching from the main hospital road and which is located in <sup>of</sup> front/the administration building leads to the director's houses. This was arranged so that guests of the directors might not have to pass through the hospital grounds to reach the homes. Another advantage to this scheme is that the doctor and his family may go to and from the house with the least amount of interference.

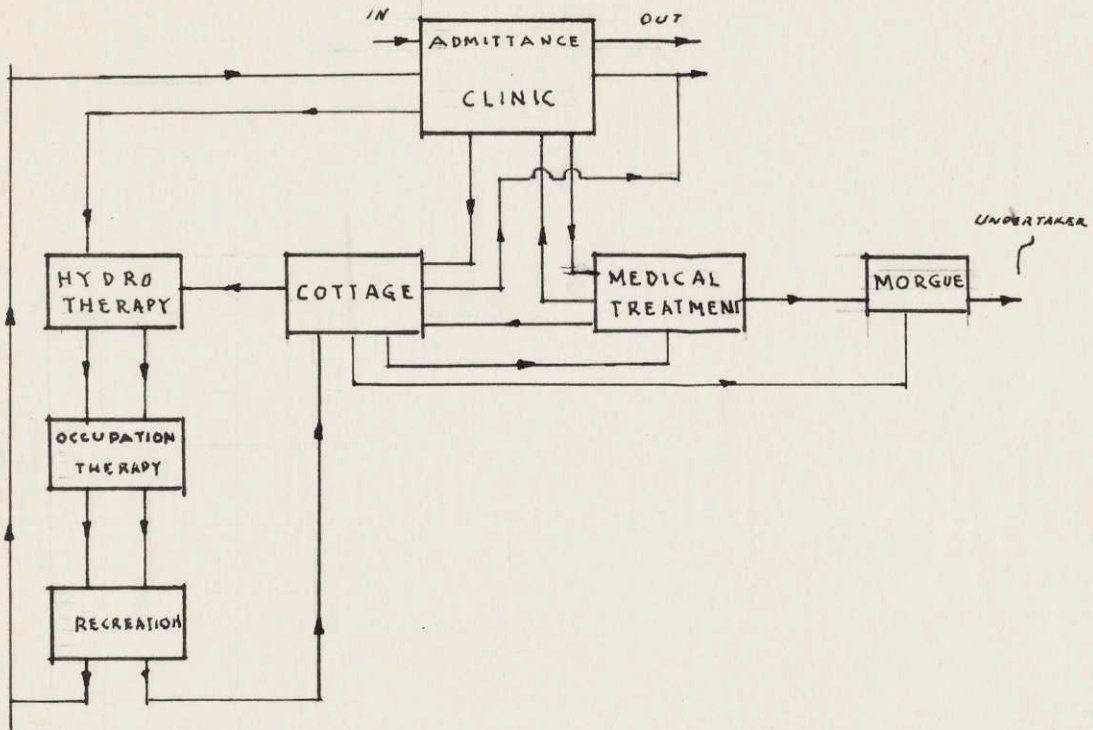
In general a service road leading from the hospital road winds around the entire group without detracting from the scenic arrangement. The road is used to service the buildings with materials and distribute food to the cottages. On the following pages is a series of traffic charts indicating the many types of traffic that are active in and around the hospital. These charts, which have been carefully worked out, will illustrate the necessity for planning the group with traffic circulation in mind.

Traffic has been considered from the exterior and the

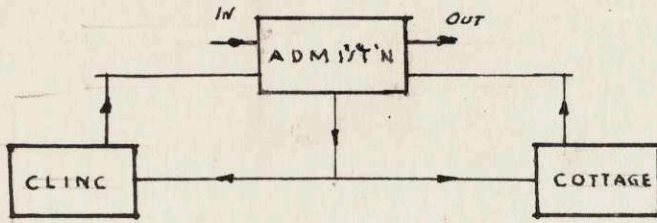
interior as well. From the exterior provisions for adequately handling (1) admitting patients, (2) arrival and departure of the visiting public; (3) the furnishing of motor parking facilities for doctors, etc., (4) separate access to and from the buildings by the hospital personnel, and (5) separate provisions for handling traffic in connection with supplies and services.

Within the buildings other traffic problems have been successfully overcome: (1) Facilities for handling of patients without coming in contact with other classes of internal traffic, (2) the same facilities for handling patients will serve for the removal of those who have died, (3) the movement of visitors through the hospital is so arranged that they are under constant supervision and are kept separated from the handling of patients and other internal traffic insofar as is possible, (5) handling of supplies, serving of meals and other matters have been provided in such a way that they will be handled from their point of origin to their ultimate destination promptly and without conflicting with other traffic (patients, visitors and hospital personnel), within the building.

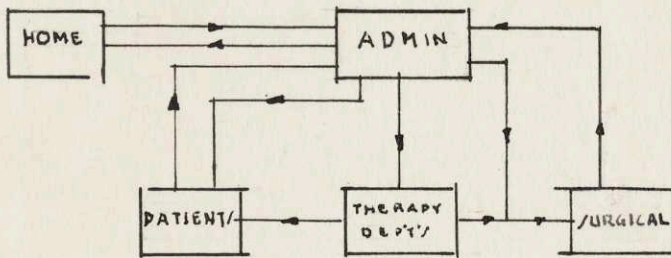
This has been so arranged by the layout of drives, service roads and tunnel connections.



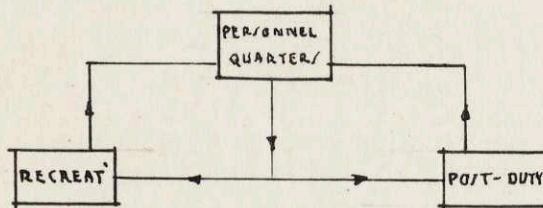
PATIENT TRAVEL



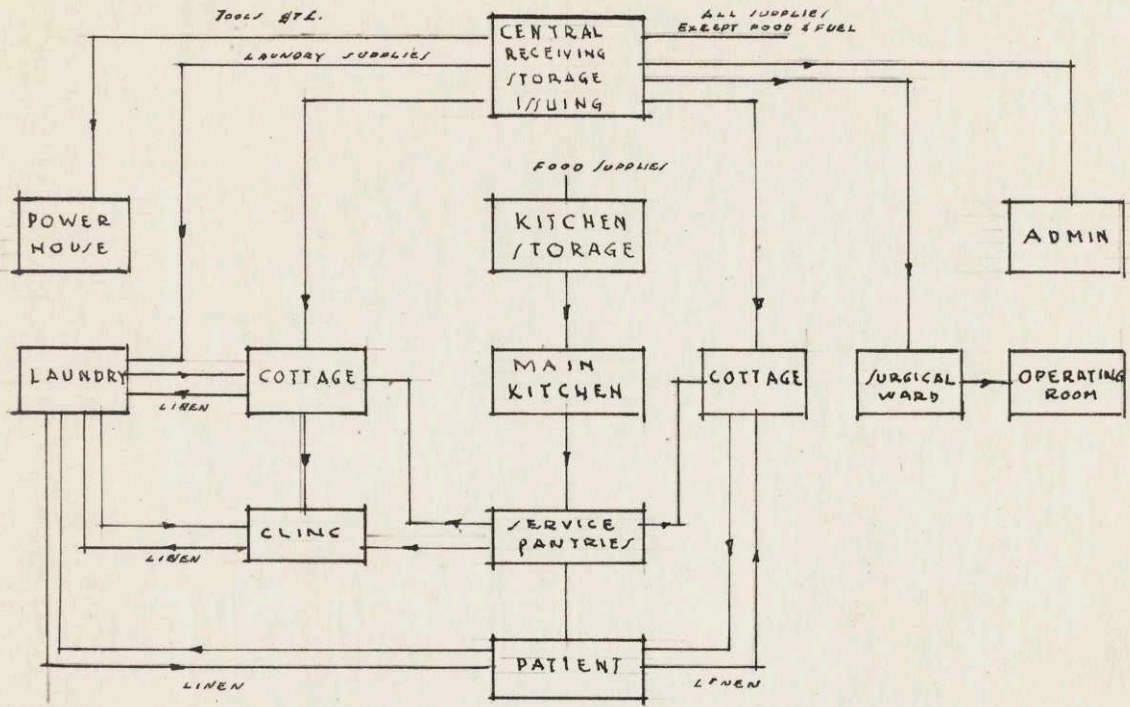
VISITOR/ TRAVEL



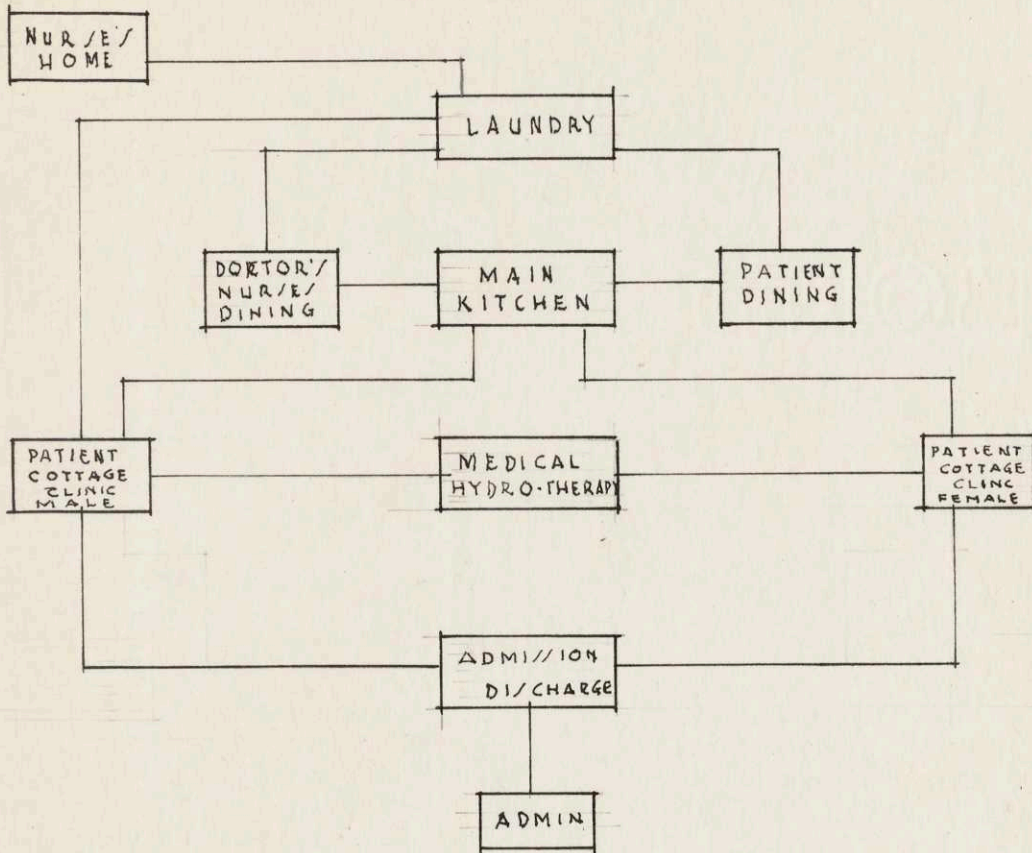
DOCTOR/ TRAVEL



PERSONNEL TRAVEL



SUPPLIES TRAVEL



FUNCTIONAL RELATIONS BETWEEN DEPARTMENTS

THE ARCHITECTURAL STYLE.

The "modern" style in architecture has been used because of the opportunity offered to apply readily a great many details that play such an important part in obtaining comfort for the patient. From the exterior the style lends itself to harmonize with the landscape; from the interior as well the absence of projecting mouldings, cornices, and other motives used in decoration gives result to sanitary, comfortable, and pleasant rooms. It is the belief of the author that this type is readily adaptable for the introduction of recent inventions.

The window treatment is an important factor in any institution of this kind. Bars covering windows are obsolete. Today windows are set in a simple steel frame which folds out in such a way as to prevent the patient from placing his head out of the window, or from attempting suicide. The author believes, however, that he has gone a step further by having designed windows to open horizontally in a shutter-like arrangement, and which have the same safety features of the above. This horizontal arrangement has an advantage over the vertical type in that it does away with any resemblance to bars that the former possess. A steel frame containing shatter-proof glass is used in the latter arrangement.



At this point it would be in keeping to note a few detailed improvements that have been thought about, but are not visible in the drawings. When travelling from one building to another or from room to room, it is necessary that the employees carry a bunch of keys to open doors. A system has been devised in collaboration with hardware manufacturers whereby each employee will carry a single key to open only those doors that their duty requires. This reduces any probability of confusion that comes about with the use of so many keys. Another detail is in the matter of hinges. These are to be installed flush with the casement so that there is no projection from which a patient may tie a rope or other device whereby he might do himself injury.

#### CONSTRUCTION

The entire group of buildings are of Class A fire-proof construction. As far as architectural details are concerned the exterior walls are of architectural terracotta tile and finished with a layer of stucco.

Floor finish; Floors in the large buildings are treated with rubber, this being known as the best for "soft" floorings. This is desired because of its quietness and requires very little treatment or upkeep.

Wall Finish; Wall surfaces in the operating room,

sterilizing room, toilets, serving kitchens and duty rooms are tiled. In the kitchen and its dependences walls are treated by a tile wainscot. Walls in corridors are finished in enamel painting.

In supplying heat to the main buildings pipes are placed in the underground tunnel leading to the heating plant. These pipes are exposed to permit repair. Integral plants supply heat to each cottage because of economy and convenience in handling.

#### THE BUILDINGS AND THEIR FUNCTIONS.

Lack of time limited the presentation at a larger scale of all the buildings that constitute the entire hospital. Four of the most important buildings are presented by means of plans and elevations. These buildings, namely the administration, clinic, social, and cottage A give an idea of the style and general character of the ensemble.

#### ADMINISTRATION BUILDING Sheet #3 of drawings.

The feature of this building is that visitors upon entrance are not confronted by a clerical force or a telephone operator who gives information. On entering he is received by a hostess whose office adjoins the large comfortable waiting room. If the visitor desires to confer with the doctor about a patient or has any other business

the hostess calls the doctor by telephone. The offices of the doctors (there being two) are in direct communication with the waiting room, making it convenient to interview the visitor either in the waiting room or in the office. Connecting the offices of the doctors are the clerical offices. The latter, secluded from external interruptions permits them to function more efficiently, and do not detract from the general architectural treatment. Another point that may be brought forward is that the service entrance, in connection with the clerical offices, is away from the public.

SOCIAL BUILDING Sheet # 4 of the drawings.

With the occupational therapy unit placed on the basement floor to take advantage of the site in connection with the social facilities, the direct relation gives an impression that this treatment has social qualities. From the circulation standpoint it is very convenient for the patient to wash-up at the end of the day when he is through with his work, and go to his dinner without leaving the building. After his meal he may adjourn to the social hall, the pavilion, or to the library. If he is otherwise disposed he may leave the building and return to his room or perhaps take a walk. Movies, dances, and other types of

entertainment can be given in the social hall as facilities for these purposes have been installed.

The open air pavilion is treated with a large flower basin which gives a garden character and helps to soften the architecture. The pavilion, orientated to give a view of the hills and the proper amount of sunshine, may be easily roofed over and glassed in for the winter months to serve as an outdoor porch.

Dining room entrance for the patients is on the opposite side of the employees' entrance, permitting a segregation of the two. The patients are served by waiters and the employees by a self serving cafeteria system. Both dining rooms are of course served by the main kitchen.

A separate service entrance for kitchen supplies and tray distribution is placed at the extreme end of the building where it may be better related to the other buildings. Another advantage in being placed here is that it is away from patient travel.

CLINIC BUILDING Sheet # 5 and Sheet # 6 of the drawings.

In addition to the three floors and a basement that the building occupies, it is divided horizontally into three separate units as a matter of workability. These three units, namely, the social, the patient, and the

treatment coordinate as one main unit. The social section serves as a means to accommodate the visitor and the patient. Here also the patient may eat or rest and be entertained in the commons room or in the solarium that is provided.

At the other end of the building is the hydrotherapy and electrotherapy section known as the treatment unit. Entirely sound proofed, the most modern type of bath and shower facilities are installed for the treatment of the patient to aid in his recovery. A rest room with lockers for the outside patient who lives in the cottages where he may rest and dress after treatment previous to his return is connected with the unit.

The isolation ward placed beside the hydrotherapy unit is also entirely sound-proofed. The patients (two for each sex) have their own continuous bath for treatment.

Joining these two units together by a spacious and well-lighted corridor is the patient unit. The patients' rooms facing the south have large windows that are operated by means of a crank, which the nurse keeps in charge. The room is furnished with a bed, lounging chair, writing desk dressing table, and a stiff back visitor's chair. Although a small dispensary is in the basement to treat small cuts, wounds, etc., the patient when he becomes physically ill

will be treated in his own

will be treated in his own room. This of course occurs when surgical attention is not required. If such may be the case the patient is taken to the surgical ward on the third floor. Partitions and walls throughout this section have been sound-proofed.

The basement floor plan which has not been shown on the plans contains the elements as called for in the program. This floor, as in the social building, taking advantage of the site, has its southern exposure on the open side and is placed under the treatment end of the building. A corridor passes through the center, on one side of which is the dispensary and the morgue. On the other side are the chill and fever rooms for the treatment of paresis, and the X-ray room.

The third floor, given over to the surgical ward, has the operation room facing the north and the patients' rooms for recovery facing the south.

#### COTTAGE "A"

Not a great deal need be said about the cottages since definite requirements have been stated in the program. Fireplaces are added for comfort together with other sundry details explanatory in the plans and elevations.

As stated before due to the lack of time, large scale drawings have not been presented of the remaining buildings. The author regrets to leave these buildings to explain themselves as to their arrangement in relation to the ensemble. The plot plan presents such an opportunity and the perspective of the entire hospital gives an idea of how the group appears on the exterior.

### CONCLUSION

This conclusion far from completes this work. It has been added to state that correspondence between France, Germany, England, and the author show the ever changing progress made in the development for housing and treating the mentally diseased. Together with the progress accomplished in the United States, it is impossible for any analysis of mental disease hospitals to remain ideal within a few years. However, the training received in research the the acceptance of enduring methods have given the writer an insight to an experience that he has long felt lacking.

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